

RECIPROCATING COMPRESSOR WITH A LINEAR MOTOR

ABSTRACT OF THE DISCLOSURE

A reciprocating compressor having a linear motor, at least one piston and cylinder arrangement and a mechanism operatively connecting the linear motor to the piston and cylinder arrangement is provided. The piston and cylinder arrangement operate to compress a fluid, preferably a refrigerant gas. The piston and cylinder arrangement has a cylinder, a piston configured and disposed to travel in the cylinder and a piston rod connected to the piston. The mechanism connects the linear motor to the piston rod to move the piston in the cylinder upon operation of the linear motor. The mechanism is configured and disposed to limit overtravel of the piston in the cylinder in response to a light load of the reciprocating compressor and to limit undertravel of the piston in the cylinder in response to a heavy load in the reciprocating compressor. The mechanism connecting the linear motor to the piston and cylinder arrangement can include a connecting rod and eccentric, a cam mechanism, a wobble plate mechanism, a gear mechanism, or a track mechanism.